METHOD AND APPARATUS FOR DETECTING AND MEASURING STATE OF FULLNESS IN CRYOPUMPS

ABSTRACT OF THE DISCLOSURE

The present system and method provides a mechanism for monitoring the level of fullness of a cryopump by measuring the cryopump adsorption capacity. An ion gauge or other total pressure gauge is in contact with the condensing or adsorbing panels of the pump. The gauge sensor, for example, can be connected to a tube or duct leading to the central core of the pump where the adsorbing charcoal is located. At this location in the pump, the gauge is exposed to low-boiling-point gases, such as hydrogen, neon and helium, while being substantially shielded from other gases such as nitrogen, argon, oxygen, or water vapor. By connecting a gauge to this location of the pump, the gauge can be used to monitor the absorption capacity of the pump.